

What is claimed is:

1. A method for collecting traffic information comprising:
  - enabling a plurality of in-vehicle systems each associated with a different vehicle to collect traffic related information during travel of the vehicles on a road network;
  - accepting information from a server computer system at one or more of the in-vehicle systems;
  - collecting traffic related information at each of the one or more in-vehicle systems according to the information accepted from the server computer system; and
  - delivering the collected information to the server computer system.
2. The method of claim 1 further comprising maintaining a traffic database using the delivered information.
3. The method of claim 2 further comprising maintaining the traffic database at the server computer system.
4. The method of claim 1 further comprising passing the delivered information from the server computer system to a remote system.
5. The method of claim 4 wherein delivering the information to a remote system includes delivering said information to a traffic information system.
6. The method of claim 1 wherein collecting traffic related information includes collecting traveling speed information associated with one or more links of the road network.

7. The method of claim 6 wherein collecting the traveling speed information includes collecting different information associated with each of two or more links of the road network.

8. The method of claim 6 wherein collecting traveling speed information includes collecting a statistic of traveling speed for the links.

9. The method of claim 6 wherein collecting traveling speed information includes logging traveling speed information for each of multiple passages over at least some of the links.

10. The method of claim 9 wherein logging traveling speed information includes logging times the vehicle passed over the links.

11. The method of claim 1 wherein accepting the information from the server includes accepting specifications of one or more links of the road network for which to collect traffic related information.

12. The method of claim 1 wherein accepting the information from the server includes accepting specifications of conditions under which to collect information.

13. The method of claim 12 wherein accepting the specifications of conditions include accepting a specification of an exception condition.

14. The method of claim 13 wherein the exception condition includes a deviation from an expected traveling speed.

15. The method of claim 1 wherein accepting the information from the server includes accepting specifications of conditions under which to deliver the collect information to the server computer system.

16. The method of claim 15 wherein accepting the specifications of conditions include accepting a specification of an exception condition.

17. The method of claim 16 wherein the exception condition includes a deviation from an expected traveling speed.

18. The method of claim 1 wherein enabling in-vehicle systems to collect traffic related information includes selecting a subset of available in-vehicle systems.

19. The method of claim 18 wherein selecting the subset of in-vehicle systems includes selecting said systems according to locations of the associated vehicles.

20. The method of claim 18 wherein selecting the subset of in-vehicle systems includes selecting said systems according to planned routes of said vehicles.

21. The method of claim 1 wherein accepting information from the server computer system includes receiving a specification of a route through the road network, including indications of links on the route for which to collect traffic related information.

22. Software stored on computer-readable media comprising instructions for causing a computer system to:

enable a plurality of in-vehicle systems each associated with a different vehicle to collect traffic related information during travel of the vehicles on a road network;

accept information from a server computer system at one or more of the in-vehicle systems;

collect traffic related information at each of the one or more in-vehicle systems according to the information accepted from the server computer; and  
deliver the collected information to the server computer system.

23. A system for collecting traffic information comprising:  
means for enabling a plurality of in-vehicle systems each associated with a different vehicle to collect traffic related information during travel of the vehicles on a road network;  
means for accepting information from a server computer system at one or more of the in-vehicle systems;  
means for collecting traffic related information at each of the one or more in-vehicle systems according to the information accepted from the server computer system; and  
means for delivering the collected information to the server computer system.

24. A method for collecting traffic information comprising:  
tracking the location of a vehicle, including detecting when the vehicle traverses each of a plurality of segments of a road network; and  
for each detected segment, comparing the vehicle's speed on the segment to a stored speed for that segment, and  
if the vehicle's speed on the segment deviates from the stored speed, transmitting a traffic notification identifying that segment to a server.

25. A method for collecting traffic information comprising:  
tracking the location of a vehicle, including detecting when the vehicle traverses each of a plurality of segments of a road network;

for each detected segment, logging traffic-related data, including data related to the vehicle's speed on the detected segment; and

transmitting the logged data to a server.

26. The method of claim 25 further comprising receiving a command from the server to enable logging of the traffic-related data.

27. The method of claim 25 further comprising receiving a request to transmit the logged data to the server.

28. A method for collecting traffic information comprising:  
tracking the location of a vehicle, including detecting when the vehicle traverses each of a plurality of segments of a road network; and  
for each detected segment, comparing the vehicle's speed on the segment to a stored speed for that segment, and  
if the vehicle's speed on the segment deviates from the stored speed, transmitting a traffic notification identifying that segment to a server.

29. A method for collecting traffic information comprising:  
receiving traffic related data from a plurality of vehicles;  
updating a traffic database using the received traffic related data, including updating speed information associated with a plurality of road segments in a road network;  
planning a route through the road network from a starting to a destination location using the speed information associated with the road segments.

30. The method of claim 29 further comprising:

enabling a subset of an available set of probe vehicles to provide the traffic related data.

31. The method of claim 30 further comprising determining a part of the traffic database to target for updating, and wherein enabling the subset of probe vehicles includes enabling probe vehicles according to the part of the database that is targeted.

32. The method of claim 31 wherein the determined part of the database corresponds to a geographic area and enabling probe vehicles includes enabling vehicles according a likelihood that they are in the geographic area.

33. A method for providing traffic related information to a user comprising:

accepting from the user a specification of a path made up of one or more road segments in a road network;

receiving traffic data related to road segments in the road network;

if the received traffic data indicates an exceptional traffic condition on the specified path, notifying the user of the traffic condition.

34. The method of claim 33 wherein accepting the specification of the path includes accepting the specification of the path by an in-vehicle system and the method further comprises transmitting the specification from the in-vehicle system to a server system.

35. The method of claim 33 wherein accepting the specification of the path includes accepting the specification over a communication network.

36. The method of claim 33 wherein receiving traffic data includes receiving traffic data from a plurality of probe vehicles.

37. The method of claim 33 wherein notifying the user includes providing an alternative path to the specified path that avoids the exceptional traffic condition.